The RK100-01 Wind Speed Sensor is specifically designed to accurately and reliably measure wind velocity under the adverse environmental conditions. Digital circuits capable of strong RFI & EMI resistance and automatic temperature compensation are build-in, it outputs voltage and current signals by electromagnetic induction, the value and horizontal wind speed are linear relation. Shell is made of high-strength aluminum alloy,the PCB board is painted with anti-corrosion coating, featured with water proof, corrosion resisting. Inside and turning position have sealing rings with nice sealing function, stop water, salt fog and dust getting in. The RK100-01 Wind speed sensor has good performance in harsh environment.

FEATURES

- Low starting threshold
- Massive all-metal construction
- Strong corrosion resistant ability
- Anti-wind load until 70m/s
- Double bearing design
- Surge protection design
- Easy Installation

APPLICATIONS

- Weather monitoring stations
- Safety monitoring of high-altitude equipment
- Ports
- Solar and wind power generation
- Mobile weather monitoring vehicles
- Marine vessels
- Remote airports & helipads
- Road & rail tunnels

SPECIFICATIONS

Output	Pulses(3.3V)	4-20mA	RS485	0-2V/0-5V/0-10V
Supply voltage	5-24VDC	12-24VDC	12-24VDC	12-24VDC
Load capacity	>2kΩ	<500Ω(typ 250Ω)		>2kΩ
Range	0-30m/s,0-50m/s,0-60m/s			
Accuracy	±（0.3+0.03V）m/s, V is current wind speed			
Response time	<1s			
Starting threshold	<0.3m/s			
Limit wind speed	70m/s			
Ingress protection	IP65			
Operating temperature	-30℃-+70℃			
Weight(unpacked)	420g			
Dimension	Cup rotor: ø220mm, Height:175mm			
Main material	Aluminum alloy			

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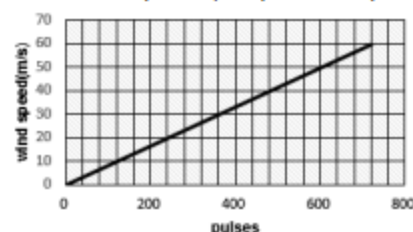| Finish	Polyester powder electrostatic spraying(black)
Storage condition	10℃-60℃@20%-90%RH

OUTPUT CHARACTERISTICS

● **Pulses**

Characteristic transfer function:

V=0.083*F

(where V = wind speed (m/s), F = output frequency (Hz))

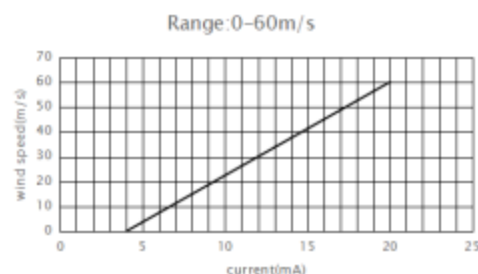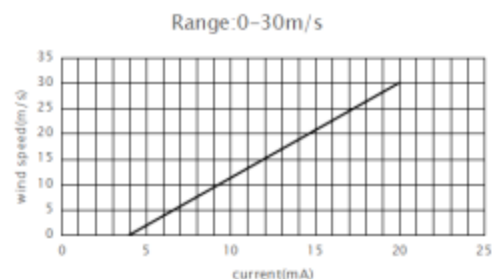● **Current**

Characteristic transfer function:

V=(I-4)/ (20-4) *30(Range:0-30m/s),

V=(I-4)/ (20-4) *60(Range:0-60m/s).

(where V = wind speed (m/s), I = output Current(mA))

● **Voltage**

Characteristic transfer function:

V=U/ (full scale voltage-zero-point voltage) *30(Range:0-30m/s),

V=U/ (full scale voltage-zero-point voltage) *60(Range:0-60m/s).
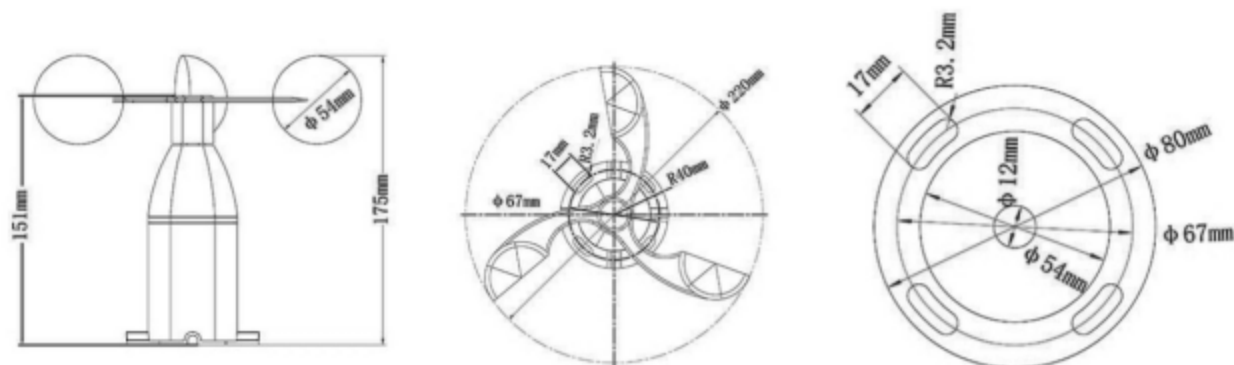
(where V = wind speed (m/s), U = output voltage(V))

● **RS485**

If the transmission distance is over 100m, please add a 120Ω terminal matching resistances on the front end and back end of bus interface respectively. See the Modbus communication protocol specification.

DIMENSION & MOUNTING

Flange mounted, fix four screws on the bracket and keep the product horizontal.

PARAMETER SELECTION TABLE

Remark	Series	Type	Output	Range①	Cable Length	
RK						
	100					
		01				
			A			4-20mA
			B			0-5V
			C			0-10V
			D			Pulses
			E			RS485
			X			Other
				A		0-30m/s(recommended)
				B		0-60m/s
					2000	Units:mm（typ）
					3000	Units:mm
					...	Units:mm

①It is recommended to use 0-30m/s range, which can get a better measurement accuracy. More than 30m/s wind is rare on mainland;

The default power supply voltage is 12-24VDC, if you have other requirements please confirm when ordering.

Example: RK100-01AA2000   Output:4-20mA, Range:0-30m/s, Cable Length:2m.

Revision time	Reviser	Current Version	Remarks
20250329	Lee	V5.0	